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LESIONS OF THE BASE OF THE BRAIN.

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IN a former paper* none of the following cases were reported, as in none then seen was an autopsy obtained, and it was the intention to give only cases where an autopsy had confirmed the diagnosis. Since the publication of that paper other cases have been seen, and as the comparison of these cases brings out points of difference instructive in regard to diagnosis, they are now given. Circumstances have delayed the completion of this paper, and also prevented the author from making an examination of the patient in Case VII., who was under Dr. Sinclair's care at the City Hospital, and who kindly permits the use of the case for the purpose of illustrating this paper.

Of the other cases, three were observed at the City Hospital, and three at the Massachusetts General Hospital, through the kindness of Drs. Bowditch and Minot.

No attempt is made to settle the nature of the lesion in most of these cases, as it is believed to be generally impossible to decide this question satisfactorily.

CASE I.—*Headache from Exposure to Sun. Loss of Power in right Leg, and recovery of its Use. Subsequent Loss of Power in left Arm and Leg, with Hyperæsthesia to Pain. Paralysis of Tongue, of Ribs, and of Diaphragm on the Left. Face Paralyzed on Left. Anæsthesia in both Arms and Neck.*

Patrick F., æt. 45, laborer, entered the City Hospital April 23d, 1869. His wife stated that in June, 1868, while walking in the sun on a very hot day, he became faint, pale and sick, and was obliged to go home; she said that he had headache during the rest of the summer, and was obliged to stop work. He himself said that in Aug. 1868, while employed as a hod carrier, and exposed to the sun, he was compelled to give up work, on account of pain shooting from one side of his head to the other, with dizziness, and a sensation as if his head would burst. This feeling came on suddenly. He did not fall nor lose consciousness. There was no perceptible loss of power at once, but he did no real work afterwards.

Three months before entering the hospital he had loss of power in the right leg, which afterwards recovered its strength.

He remained in bed more or less from September, on account of pain in head, hiccough, and weakness. Five weeks before entering the hospital, after getting up in the morning he felt a sort of sleepy feeling coming on in his left hand and leg. This feeling increased, and he gradually lost power over them, until he reached the condition he was in when the record was made.

He suffered from severe and constant pain and fulness in his head, especially over the frontal region. There was great tenderness on pressure on both sides. Sometimes there was jerking of the left leg. His eyes were not sore or painful, but there was decided loss of visual power. Motion of his head in any direction caused pain in the sub-occipital region. There was some dysphagia and thickness of voice.

It was recorded on the day after his entrance to the Hospital that there was excessive hyperæsthesia on the left side, sensation being normal on the right.

He had constant hiccough, and at times dyspnœa; his hiccough gradually became less severe and distressing; the dyspnœa was at times very harassing.

The above is taken from the records of the hospital, as it was not thought best to weary the patient by a too prolonged examination.

When seen he was lying on his back. He could see objects at a distance, but not so clearly those which were near. The right pupil was larger than the left, the left being rather more contracted than normal.

* See this Journal, Vol. IV., No. 6, p. 93, *Concerning the Diagnosis of Lesions of the Base of the Brain.* In that paper the reference to Case V., p. 100, was inadvertently omitted; it should have been referred to Ed. Medical Journal, 1860–61, p. 794.

The left also responded to the stimulus of light less readily than the right.

It is stated in the hospital records that the left cheek was flabby, and dilated on blowing. This could not be seen at the time of the examination. On laughing and blowing the facial muscles seemed to work well on both sides. There was no ptosis. He protruded his tongue to the left. There was complete paralysis of motion in the left arm and leg. Respiration was peculiar and one-sided. The left side of the abdomen was always fuller than the right, and did not move during respiration.

The right side moved naturally, and on expiration a hollow was formed at the lower margin of the ribs, which contrasted strongly with the fulness noticed on the left side. The ribs on the left side were nearly or quite stationary during respiration. Respiration was accompanied with a peculiar sighing and sucking noise.

On tickling the soles of the feet the right foot was voluntarily withdrawn, but the left was not moved, though he showed by an exclamation that he felt the tickling there more than on the right side. Sensation to pinching was much greater on the left than on the right side, and perhaps greater than normal. The hyperæsthesia to pain on the left was also shown by the fact that a moderate pressure with the æsthesiometre produced discomfort. On the right firm pressure, so as to leave deep indentations, was at times not felt.

The following is the result obtained by the æsthesiometre. A blister on the neck interfered somewhat with the result as regards the neck and cheek.

	Distance at which 2 points were distinctly felt.
	M.m.
Leg just above kn., rt.	70 (2·73 inches.)
" " lft.	30 (1·17 ")
Transverse, forearm, rt.	only 1 point at 65 (2·53 ")
" " lft.	45 (1·75 ")
Longitudinal " rt.	felt nothing at 85 (3·31 ")
" " lft.	80 (3.12 ")
	seemed about ¾ inch apart.
" arm, rt.	100 (3·9 inches) when pressed hard felt only as 1 point.
" " lft.	100 (3·9 inches) only when pressed hard.
Neck, right	55 (2·14 inches)
" left	55 or 65 (2·14 or 2·53)
Cheek, right	65 (2·53 inches)
" left	55 (2·14 ")
Forehead, right	30 (1·17 ")
" left	60 (2·34 ")

When I saw this patient, the hyperæsthesia on the left was much less than when he entered the hospital. His hiccough diminished in severity, and his dyspnœa increased, until May 1st, when he was removed by his friends. In a week or ten days he died.

The sensibility to touch was diminished on both sides, but most so on the right, except in the forehead.

Two explanations of these symptoms seem possible; either (*a*) two lesions, one situated below the decussation of the anterior pyramids, and the other in the medulla above that point, so as to implicate the hypoglossal and the sensory branch of the fifth; or (*b*) one lesion situated above the decussation of the hypoglossal, involving some of the sensitive fibres of the fifth, and in the sensory tract on the left, crossing over to the right and affecting slightly the sensory tract and much more the motor tract, not producing entire destruction of the nerve fibres, but diminishing them in number or in conducting power, so as to render motion impossible on the left, and to greatly diminish sensation on the right and somewhat diminish it on the left.

In favor of *a* is the loss of motion in the left arm and leg and the whole of the left side of the body, the hyperæsthesia to tickling and pain on the left, and the diminution of the sensation of touch and apparently of pain on the right. But the sensation of touch is also rather dulled on the left, especially in the arm, and is diminished in the neck and cheek, and especially so in the forehead. This would show that the sensitive tract is implicated on both sides; for if the lesion was in the cord and confined to one side, there should be very decided hyperæsthesia on that side below the point of injury, which is certainly not the case here. Hence a moderate loss of sensation on the same side, with motor paralysis, shows an amount of lesion to the sensitive tract greater in proportion than the same diminution would show if found on the opposite side. The temporary loss of power in the right leg would also show the existence of morbid action on both sides.

The pain and fulness in the head, and the pain felt in the suboccipital region on moving the head, point to the upper part of the cord or the medulla and pons as the seat of the lesion, though not necessarily so. The peculiar one-sided respiration shows that the cord was affected above the origin of the phrenic nerves; that is, above the 2d cervical, or that the centre of respiratory motion in the medulla was affected.

As there must be two lesions, if one was situated below the medulla, and as there is no sign of sclerosis in patches (*sclérose en plaques*), and as one lesion above the anterior pyramids in the medulla will explain all the phenomena, I am more in favor of

the second supposition, locating the lesion in the medulla near the *nœud vital*. The loss of power, which was afterwards regained, may be explained either by supposing it to have been reflex, arising from irritation of portions of the nerve tissue in the neighborhood of the disease, and which disappeared when the disease had advanced farther, or it may have been due to local changes in the circulation, which afterwards disappeared.

This case also shows the separate character of the sensation of touch and of pain.

Case II.—*Symptoms following Exposure to Heat. Disturbance Confined to upper part of Medulla and lower edge of Pons. Relief from Bromide of Potassium.*

Dennis L., æt. 6, was brought to me last July. For three days he had not been able to speak. When first taken he was sick to his stomach, and not able to stand. His mother thought that his right leg was weaker than the left, and that he dragged it when walking.

When seen he complained of pain in his forehead and the back of his head. He said he felt when touched. There was no reflex action on tickling the meatus auditorius, or any other part of the face. The pupils responded well to the changes of light. The eyes moved well, and there was no ptosis. He could shut both eyes. His tongue protruded to the right. The saliva ran out of his mouth, his mother thought more on the left side than right. He choked sometimes on swallowing. The previous week he could not keep his food in his mouth while eating. He could open and close his jaws. Articulation was so indistinct that it was difficult to understand his meaning. His mouth and lips did not move on either side when he spoke, and it was not possible to make him smile; the lower part of his face was motionless except when his jaws were moved. The power of grasping was about equal in both hands.

Two days later he was again seen. It was recorded that the soft palate hung down a little on the left, the uvula was about straight, if anything it bent a little to the right. The tongue was protruded better, he walked better and talked better, there was some motion to face, but it was slight.

This boy had been exposed rather more than usual to a hot sun just before the attack. A disturbance of the circulation at the base of the brain was diagnosed, and bromide of potassium and cold to head were prescribed. The bromide was given, but the cold was not used. When seen the second time the mother thought he had improved much. He was not seen again, and therefore it is not possible to say what the final result was.

The disturbance was limited to the base of the brain below the middle of the pons, the seventh and the sensitive root of the fifth on both sides, the hypoglossal on the left, and seemingly also the spinal accessory were affected. The ocular nerves and the motor branch of the fifth seem not to have been affected, also some of the fibres of the seventh, which supply the upper part of the face, seem to have escaped. Hence the seat of the lesion was probably the upper part of the medulla, and perhaps the lower edge of the pons. The respiratory nerves, those, I mean, supplying the diaphragm and the ribs, were not affected.

This case is interesting in connection with the previous one. In both the symptoms followed exposure to the sun, and in both the affection was at the posterior part of the base of the brain.

The following three cases were seen at the Massachusetts General Hospital on Nov. 23d, 1869.

Case III.—*Alternate Paralysis. Face Affected on Left, Limbs on Right. Embolism.*

John H., colored, æt. 50. He seemed to be naturally a very intelligent person, but his statements in some unimportant particulars did not agree with those which he gave when he entered the Hospital.

He had enjoyed good health during the early part of his life. He was born in Baltimore. Had ague when quite a boy. He had lived at sea for about nine years, till summer before last. Winter before last had two or three falls on the ice; struck the back of his head. This last summer, while in Baltimore at work in a brick-yard, the bricks fell in and struck him on the right side of his head, shoulders, and body. He fell down, but was not much troubled by the accident, except from lameness in his hip. Had rheumatic pains in many parts all last summer before he was hurt. Never had any venereal disease.

Early in September he was paralyzed in his face. He had occasionally pain in his head. His left eye watered very much. His right ear was a little deaf. He could smell both sides and taste on both sides. (He said he tried to see whether he could; how far his trial was such as to give correct results is uncertain.) He had no diffi-

culty in swallowing and none in breathing. Food did not return through his nose. He had a little difficulty in talking, because his left cheek puffed out; and food collected between the left cheek and the gum.

There was after a short time itching in the right side, and that side felt "puffed up." (He seemed to mean by this that there was numbness. It was not certain how long before the paralysis of the limbs this occurred.) He had no smarting, no sharp darting pain, only a little dull pain in hip. He urinated freely. Was habitually costive, and seemingly no worse lately.

In his statement at his entrance to the Hospital, he said he was first affected with paralysis only a few days before the attack of his arms and legs.

Early in October (Oct. 2d, it is stated), he staggered and fell against a wagon. He managed to get home. He could not move his right leg much, and could move his right arm none. He could move his leg very much more than his arm. There was no vomiting. His food sets well, he has a good appetite, and is not troubled with flatus. He has a slight cough. When first taken in his face he had some trouble with phlegm, but none now.

Now, the left eye does not close so completely as the right. Both are opened equally well. The pupils of both eyes contract on exposure to light, the right a little more readily than the left. Both eyes move well, no strabismus.

The tongue is protruded straight, and apparently moves freely in all directions, but he says it is easier to turn it to the right than to the left. Food catches in the left side, and he is troubled about swallowing.

He moves the right side of his face more easily than the left, though he seems able to move the left a little.

He can flex the forearm on the arm a very little, can adduct arm a very little, other motions impossible. The arm is rather stiff; only outward rotation causes pain if carried beyond a certain point.

He can move right leg slowly in all directions as he lies in bed, but adduction is very difficult, and he can only with great exertion cross the right leg over the left. Muscular sense seems preserved in right arm and leg.

On examining the heart a rough murmur was heard with the systole, loudest over the aorta.

Temperature in the right axilla, 98¾.
" " left " 97½.

The following is the result of examination by the æsthesiometer.

Place.	Distance at which 2 points were distinctly felt.
Leg on inside below knee, left,	1⅜ inches.
" " " right (not satisfactory)	1⅝ "
Chest above and inside of nipple, left,	1⅜ "
" " " right,	2⅛–2⅜ "
Forearm, left,	½ "
" right	2¼–2⅜ "
Back of hand, left,	¾ "
" " right,	1⅜ "
Neck over posterior edge of s. m. left,	⅞ "
" " " right,	1 "
Cheek over malar bone, left,	¾ "
" " right,	¾ "
Scalp just over eye above temple, left,	¾ "
" " " right,	½ "

Feb. 25th, 1870.—Was seen again. He moves his leg better, and can walk about the wards, and even out doors, without much difficulty; when lying down he can cross the right leg over the left much better than at the first examination, and bends the knee a little better; he can abduct better than adduct the leg. The motion of the right arm is about the same as at first examination; the righ forearm cannot be straightened beyond a right angle; he can flex the forearm a little and adducts the arm a little, he cannot abduct nor raise his arm and cannot move his fingers. The right leg and hand tremble considerably when lying down, not when he stands up. The motion of the left side of the face seems to be a little freer. There is some lacrymation and a little purulent discharge from the left eye, and he cannot see so well with it. The motions of both eyes seem good, and no difference could be noticed between the pupils, both responding equally well to the stimulus of light. The ticking of a watch could be heard more than three times as far with the left ear as with the right.

The following is the result of an examination of the sensation of touch with the æsthesiometer.

Place.	Distance at which 2 points were distinctly felt.
Leg on inside, left,	1¾ inches.
" " right,	1½ "
Chest over pectoralis mag., left,	2 "
" " right,	2 "
Forearm, left,	1½ "
" right,	1½ "
Back of hand, left,	1½ "
" " right,	1¼ "
Neck over edge of s. m., left,	3 "
" " " right,	2½ "
Neck, transverse, over s. m., left,	1½ "
" " " right,	1 "
Cheek over malar bone, left,	⅝ "
" " right,	⅝ "
Over parietal bone, left,	1½ "
" " right,	1¾ "

This case is interesting from the clearness with which the symptoms are marked.

As he has been improving since his stay at the Hospital, and as it is evident from the amount of paralysis that the lesion is not extensive, there is a possibility of his recovery.

This was written before the second examination. Of course now the favorable prognosis is confirmed, but it is still uncertain how much use of the arm he will finally have, and the diminished sensibility on the left is not very favorable.

In view of the existence of a previous rheumatic attack, and of the existence of a lesion of the aortic orifice, it is not improbable that there has been obstruction of an artery. The existence previous to the last attack of symptoms referable to the base of the brain is in opposition to this view, and diminishes the certainty of the diagnosis. It is not very rare for an injury to cause no immediate cerebral symptoms, but subsequently serious changes may occur in consequence. This may be such a case, and the sudden attack in October may be only the sequel of the lighter affection which was present in September, and both may be due to the blow on the head received in Baltimore; but against this there is the objection that such cases are rare, and usually the injury is more general, not being limited to a comparatively small spot. Again, both attacks may be due to embolism, which seems more likely to be the case. It was not intended, however, to discuss this question.

The symptoms point to the posterior part of the base, to the lower edge of the pons. As the nerves supplying the eye and the hypoglossal are not affected, and as the spinal accessory is not interfered with, the seat of the injury must be between the origin of the sixth and of the spinal accessory and hypoglossal.

Of the cranial nerves, the seventh is the most affected, but as it is the left facial which is paralyzed, while it is the right arm and leg which are affected, the lesion is on the left before the seventh crosses. If the deafness of which the patient speaks is recent and connected with the present affection, then the eighth is affected after it crosses. The fifth seems to be partially affected, and there are subjective symptoms referring to the hypoglossal, but the amount of these changes is slight, and may be due to the boundaries of the lesion encroaching on the domain of these nerve centres.

The sensibility was nearly the same in both legs. As the legs were also less affected than the arms in regard to motion, this is one case in favor of the view that the nerve fibres supplying both motion and sensation to the lower extremities, ascend through the pons in a somewhat different place from those supplying the arms; in other words, the fibres for the lower extremities are grouped together, and also those for the upper extremities.

If the symptoms are caused by an embolism, the locality is unusual. The place in which this most frequently occurs is one of the branches of the middle cerebral artery. An embolism of an artery supplying the pons is rare. But the small extent of the lesion shows that if the symptoms arise from an embolism, the foreign body must be small, and hence would probably be more likely to take a course different from that taken when it is larger.

CASE IV.—*Lesion in Pons. Paralysis of left Side of Face and Limbs to Motion and Sensation, and of right Leg to Sensation. Interesting Phenomena connected with Sensation.*

Wm. C., æt. 56, currier. Has a scar over right eye, received when 10 years old; bone not injured. Twenty-five to thirty years since, his arm was severely injured in machinery. Generally healthy. Never had rheumatism. Had had vertigo and slight headache for some months before he was attacked. About two years since, while walking, his strength gave out, but he got home alone. His left leg and arm were very weak. He could swallow well and chew well. Food was not caught between the teeth and gum. There was slight salivation. At first he grew worse, but for the last two months he has been growing better.

Now, he shuts both eyes easily, but the left eye is not shut so closely as the right. The left pupil responds scarcely at all to light, but the right moves readily. Both eyes move well. No strabismus. No ptosis. He can now read only coarse print. His tongue moves easily. His face moves most readily on the right side. He has a little increase of salivation over what is natural. He cannot move his left arm. He can extend his left leg a little, but has control over no other motion. The fingers are contracted. The left forearm is contracted on the arm, and the arm is stiff at the shoulder. Bowels regular, about once in two days. He had one involuntary dejection. His water comes away slowly. His left foot is most sensitive to tickling. Heart sounds are normal. Temperature on both sides is 99°.

The following is the result obtained with the æsthesiometer.

Place.	Distance at which 2 points are distinctly felt.	
Inside of leg, left,	3½	inches only 1 point.
" " right,	3½	" " "
Front of thigh, left	3½	" " "
" " right,	2	inches.
Chest, left,	3½	" " "
" right,	2½	"
Forearm, left,	3	" " "
" right,	1¼	"
Neck, left,	3½	" " "
" right,	1½	"
Cheek, left,	2	"
" right,	1	"

On the right leg there was considerable hyperæsthesia, the contact of the two points causing great discomfort, much more than is natural, and producing a complaint of a burning sensation. The same burning sensation was felt to a less degree in the left leg. Possibly this sensation in the right leg may have interfered with distinguishing the two points.

On asking him to point to the spot which was touched on the left side, when the sensation of only one point was produced, he placed his finger nearly midway between the two points on his neck. When they were on his left forearm, he at first placed his finger on the inner aspect of the arm, not far from the shoulder; then, finding he was mistaken, he moved his finger about in an uncertain way, until after two or three trials he felt the instrument with the finger of his right hand. When the points were on his left leg, he pointed to the centre of his left thigh; but on the right leg he pointed to a spot about midway between the two.

About a week after he was seen, he left the hospital.

The lesion in this case is above the hypoglossal; it is so situated as to include both the seventh and the fifth of the left side, the motor fibres of the left extremities and the sensory fibres of the left arm and of both legs, but the left leg more than the right. The fibres conveying pain from the right leg seem at some part of their course to be irritated rather than destroyed. The ocular nerves were not affected. The injury was, then, on the right side, after the crossing of the seventh and fifth, involving the sensory tract and still more the motory, and so situated that an irritation at least was felt by the nerves on the left which supply the right leg. The seat of the lesion, then, must be in the pons, above the point which was affected in Case III., probably near the upper border of the pons.

CASE V.—*Paralysis of left Side gradually Increasing. Excessive Salivation. No Loss of Sensation.*

Henry ———, æt. 54. Several years since he received an injury which has caused him a lame back since; more than a year ago his back was more lame; he then had frequent micturition, which continues in a measure. He was obliged to rise four or five times at night and relieve his bladder. He thinks he had a slight attack of paralysis a year ago or so, as his left side has seemed weaker than it was before. His left ear and neighboring parts of face were numb.

In February, 1869, he felt dizzy, and then his left knee suddenly gave out and he nearly fell. He then walked a short distance and sat down, when he had a second attack of dizziness. After the first day he could move about, but after two to three days, his arm became affected, and that with his leg grew worse. A month later salivation came on. He had a sensation of a string in his throat first. His food lodged in the left side of his mouth, and in chewing, his lips were caught by his teeth on that side. He did not swallow so well as natural. Respiration was not interfered with. Speech was rather thick. Mouth was drawn to right. His bowels, which were usually regular, had become costive.

Now his left eye does not close so perfectly as the right. He opens both eyes equally well. Both eyes move well, no strabismus. Pupils respond well to light, but right better than left. Tongue deviates to left; it moves, however, in all directions. He blows through the left side, and the saliva runs out at that side. He is very much troubled by excessive salivation. The right side of his face moves more readily than the left.

There has been some improvement since he has been in the Hospital, and now the left arm can be raised as high as the shoulder. The leg can be extended, but not flexed, abducted, nor adducted.

He has dizziness, which he feels mostly in the back part of his head, and on making extra exertion he has a sharp pain on the left side, which is only momentary.

There is numbness of the left hip only. Itching in left arm and leg, tingling in hip-joint.

The fingers, wrist and elbow on the left side are contracted; they drew up a little at a time; this contraction sometimes relaxes, and he can manage them well, then they contract again.

There has been twitching of left leg and foot, but it was probably caused by strychnia before he came into the Hospital. When he gapes his arm and leg are stretched out.

There is a very little more reflex action on tickling the left than when the right foot is touched.

He says he cannot cough so freely or so strongly as when he was first taken.

No discharge from nose.

The left arm is much smaller than right, which he says is due to a burn received eight or ten years ago.

Temperature about the same in both axillæ.

There was essentially no difference in the sensation of the two sides.

In this case, certainly, the sensory tract was respected. The question then arises, whether it may not be one of those cases of reflex paralysis due to lesion of the cerebellar peduncle.

The tendency to twitching, amounting almost to spasm, the contraction and relaxation of the arm, would point to this as the case. It is not, however, an easy question to decide. If it is not so, then the lesion is on the right side of the pons, and is confined entirely to the motor tract.

In both this and the preceding case the salivation was remarkable; it did not seem to be viscid, as when the lingual is divided, but rather seemed to arise from irritation of that nerve.

Feb. 25, 1870.—This patient was seen again. He said there was not so much spasmodic contraction of the arm as before; it will now hang down when he stands. His head is not so dizzy, and there is not so much salivation. His left foot and leg do not shake so much, and he can move them a little better, and he walks firmer and longer. When he stoops and raises his head, he is still slightly dizzy. The tongue is protruded a little to the left. He chokes on swallowing. The sensation to touch is somewhat altered. Thinks he can bite on both sides alike. Moves face on right side easiest. Pupils contract equally.

Place.	2 points felt as such at a distance of
Forearm, left,	1½ inches.
" right,	1 "
Back of hand, left,	¾ "
" " right,	½ "
Cheek, left,	⅜ "
" right,	¼ "
Over eye, left,	½ "
" right,	½ "
Leg, left,	2¼ "
" right,	1 "

The progress of the case is in opposition to the view that the symptoms are caused by a reflex action. The patient thought himself better, and in some respects he seems to be better; but from the results obtained in regard to sensation it is doubtful whether there has been any real improvement. If the convulsive movements, when he was first seen, were caused by strychnia, their cessation is easily explained without recourse to improvement, and perhaps also the disappearance of the vertigo. The prognosis is not very favorable.

The following case, seen at the City Hospital, is not so clear as the others. The patient was not in a condition to give a very satisfactory account of herself.

CASE VI.—*Facial Paralysis on the left. Diminished Power in right Leg. Loss of Muscular Sense in right Leg. No marked affection of Sensation.*

L. D., æt. 69. As far as could be learned, the attack occurred suddenly; she fell down just after supper and vomited. Another statement says she lost the use of her lower limbs gradually. She is said to have since improved in the power to use her hands.

When seen, she kept her hands and head in continual motion, and moved the upper part of her body very much. The legs were not moved unless she was told to. On pinching the legs and thighs pretty hard she said she felt it, and moved her legs a little.

There was no ptosis; she closed both eyes well; both pupils acted under the influence of light, and were of about equal size, the left possibly a little larger than the right. The left, however, acted more sluggishly than the right. The eyes moved well in all directions. No strabismus. The mouth was drawn to the right. The tongue protruded in a straight line. She moved her head well when it was possible to make her understand what was wanted. She seemed to feel pinching equally in both arms, and also light touching. She was able to touch any part of her head with both hands. She could bend both knees, but the right not quite so well as the left. She could not always touch her right knee with her eyes covered. Once, when told to touch it, she tried several times, and each time touched the left instead, and then gave up, saying she could not do it.

She said there was no itching nor tingling, and but little pain in either legs or feet.

She withdrew very quickly both legs

when the soles of the feet were tickled. No tenderness along spine. Palate not examined.

There was no evidence of any disorder to produce reflex paralysis.

There may in this case be more than one lesion, as the intellect was very much affected, or that may be due to senile decay.

The principal lesion causing the paralytic symptoms was, however, situated in the pons, since there was alternate paralysis. The face was affected on the left; the right leg more than the left, and the muscular sense was lost, or nearly lost, in the right leg. The left pupil was also more sluggish than the right. None of the nerves anterior to the seventh were affected, so far as could be learned. Hence the seat of the lesion was probably in the lower part of the pons near the median line, but rather more to the left and before the crossing of the seventh nerve; also the motor nerves of the arm were affected only at first, and later perhaps subjected to an irritation which would account for the incessant motion of the arms. It is, however, with some hesitation that I give this case and its explanation, for the data are not complete.

Case VII.—*Paralysis of Face; Headache; Partial Paralysis of Limbs. Autopsy.*

R. B., æt. 21, entered the City Hospital on Oct. 27th, 1869. He was said to have enjoyed good health until six weeks before his entrance, when he first noticed that he could not close his left eye. He had at that time severe headache confined to the frontal region, which lasted only a short time.

The following are the symptoms mentioned in the Hospital records.

All the muscles on the left side of the face, including the buccinator, were paralyzed, the tongue protruded to the left, and he could not chew on that side. On walking or standing he was dizzy. When standing he was inclined to fall to the left; subsequently the motion of the left arm and leg were impaired; this loss of motion did not amount to complete paralysis, only impairment, and remained the same for several weeks. About a month after this was recorded there occurred involuntary motion of the left hand and arm, with stiffness on extension, and a week later he could barely support himself for a minute or so on the right leg and not at all on the left. I saw him at that time, and think the limbs could be moved while he was lying abed, though nothing is said of this in the record.

Jan. 21.—There was noticed to be difficulty in swallowing liquids, which increased till his death. The saliva flowed from the right side of his mouth without restraint.

Sensation was affected chiefly in the face, not being changed in the limbs or body. There was pain on the left side at the exit of the facial nerve, and later on the internal surface of the left arm. Headache was present most of the time, not continuous, but in paroxysms, generally frontal or parietal, occasionally occipital, and usually on the left side; during the last month of his life it was very severe. The left cheek was numb, and in the middle of January it is said that the left eyeball was almost insensible to touch. He had been partially deaf in the left ear for six or seven years; the sight of his left eye was diminished, and finally the right eye diminished in power. Towards the end there was pain over the pubes.

He had stupor for two or three days, December 18th and 19th. Occasionally his face would be covered with sweat, but this may have arisen from the severe headache. There was flushing of the face on slight exertion, the left conjunctiva was injected, the left pupil contracted, and there was prominence of the eyeball. Nausea and vomiting are mentioned in the beginning of January.

He died Feb. 18th.

The autopsy was made by me eight hours after death.

The vessels of the meninges were strongly injected; at the base of the brain the congestion included the arteries as well as the veins.

About four ounces of serum, by estimate, were found in the lateral ventricle. The brain substance was firm, with many puncta vasculosa. On removing the brain, the left side of the cerebellum was found to be very prominent, being half as large again as the other side; the medulla was pushed towards the right side, and the lower part of the pons was tipped out of place. The first, second, third and fourth nerves were unimplicated. The sixth nerve, from the point of apparent origin nearly to its entrance into the canal of the dura mater, was embedded in a layer of firm tissue, which extended over the upper part of the lower surface of the left lobe of the cerebellum, and implicated nearly the whole of the sensitive division of the fifth nerve. The seventh and eighth nerves could not be found; their usual seat being entirely covered over and filled up by a morbid growth.

The ninth, tenth and eleventh were not affected by the growth, but lay over the abscess, and were evidently put on the stretch. The twelfth did not seem to be implicated.

Along the side of the medulla was a swelling, soft and fluctuating, which on being opened gave exit to a large amount of pus of a peculiar pea-green color. The cavity of the abscess was nearly as large as a walnut, and had a distinct lining membrane covered with small prominences like villi. This abscess extended upwards and inwards under the medulla and lower edge of the pons not affecting the cerebellar peduncles, except by pressure, seeming to lie between the lower and middle peduncles, and to press them apart; the lower peduncle was spread out fan shape over its surface. It extended down almost to the lower part of the left cerebellar lobe, near the median line, the corpus dentatum not being affected.

On the outer side of this abscess was another as large as a shellbark, separated from it by a thin wall of cerebellar tissue, occupying the lower part of the upper portion of the left cerebellar lobe. The fourth ventricle was a little larger than usual, the wall of the ventricle being stretched over the abscess.

The morbid growth consisted of cells in groups by themselves, and fibrous tissue, very abundant, but seeming not to form areolæ for the cells. The walls of the abscesses were almost entirely composed of cells. I thought the growth a glioma of the auditory nerve. Dr. J. C. Warren was more inclined to look upon it as of inflammatory origin. According to my view, might it not have caused the abscess by pressure on nutritive vessels? According to Dr. Warren, it may have been the effect of the abscess.

The symptoms in this case show that both divisions of the fifth, the seventh, eighth and twelfth, and probably the eleventh nerves were affected. But there are also certain symptoms referable to other parts of the nervous system; loss of power in the limbs, and diminished eye-sight, and involuntary motions in the arm and head, and dizziness, with nausea and vomiting. By referring to page 102 of the last volume of this JOURNAL, it will be seen that imperfect paralysis on the same side as the lesion, without loss of sensation, vertigo, and impairment of sight are mentioned, as assisting in the diagnosis of lesions causing irritation of the middle cerebellar peduncle.* All these symptoms were present in this case in addition to the symptoms connected with the cranial nerves.

Were the symptoms such that during life a lesion of the cerebellum might have been diagnosed?

"Tumor of the cerebellum is especially characterized by *headache*, especially in the *occipital* region, *motor disturbance* commonly in the form of *convulsions* and *difficulty in walking* and *standing*, in *convergent strabismus*, often also in *amblyopia*. The negative symptoms which are most prominent are want of *sensory disturbance* and of *paralysis*, as well as want of *disorders* of *intelligence* and of the *special senses*, excepting *sight*."

"The final symptoms of tumor of the cerebellum belong specially to a lesion of the medulla oblongata. Difficulty in swallowing, and disturbance of the respiration occur, which hasten death." (Ladame, Hirngeschwülste, p. 99.)

This is the shortest and clearest statement of the symptoms of tumors of the cerebellum I know of, and is the result of the analysis of seventy-seven cases. The negative symptoms do not correspond exactly, owing to the fact that other parts were affected by pressure, or by extension of the disease. Yet it would seem that in such a grouping of symptoms we should be justified in referring the disease to the cerebellum. The vertigo of which this patient complained might be found also in lesion of the pons, but I believe is rather more frequent in affection of the cerebellum.

The following, though perhaps an *ex post facto* explanation of the relations of the symptoms to the lesion, is yet of interest. The morbid growth commenced several years since in the auditory nerve, about the time the hearing was lost, it extended so as to implicate the facial nerve at the time when he noticed his inability to close his left eye; the growth of the mass had been slow; perhaps there would have been noticed a failure in the power of the facial previous to that time, if he had thought to inquire in regard to it. The partial loss of power in the left arm and leg was noticed about two months after the paralysis of the facial muscles, when the tumor had increased so as to press upon the middle cerebellar peduncle, and the root of the fifth nerve. Subsequently the symptoms increased rapidly in severity, for the nutrition of a portion of the cerebellum was interfered with and the abscess formed.

The next and last case is that of a woman

* The tumor in this case must have pressed on the middle cerebellar peduncle, between the eighth and fifth nerves, and pressed on the root of the fifth nerve, the points where pressure, according to Brown-Séquard, is most likely to produce the reflex symptoms.

seen at the City Hospital. Her case is given, not because the base of the brain was affected, but as the lesion was confined to the cord below the medulla, it will show the contrast between cases of spinal lesion high up, and cases of lesion of the base.

CASE VIII.—*Abnormal Sensation and Numbness, followed by Sense of Heat. Recurrence of Abnormal Sensations. Diminished Sensation on Right. Extension of Disease and Death.*

B. K., æt. 23. Had been exposed to wet just before the first attack. Usually not so exposed. Had never had occasion to lift heavy weights. Was never sick before except with headache.

Two or three years since she had pain first in right big toe, then over the whole body. A prickling, sleepy feeling arose in right foot, which extended in two days to the knee, and in two to four days more to the hip. This sleepy feeling ceased in a short time, and then a numbness extended up the legs to the hips, which lasted only a few weeks; she then recovered, except a subjective sensation of heat in the right limb as high as the hip. She could walk and move about well. This sense of heat continued till about eight weeks ago, and then the pain in the toe recurred. The pain was of an aching character, and continued till the occurrence of numbness a few days later. About three weeks ago occurred the sleepy feeling, a prickling, as if something was sticking in all the time.

This prickling extended up to the ninth rib, the numbness extended higher. The prickling was not in the upper limbs, except in the fingers at night. In the right arm was numbness; not so bad as in the leg.

About the middle of June the same sensations were experienced in the left big toe, and subsequently in a few days the prickling, without numbness. The prickling extended on the left as high as on the right. In the left arm there was numbness, but no pain.

A few weeks ago she had a trembling fit, as if cold, but was not cold.

The motion of the eyes is good, the pupils react well, the eyes open and shut naturally. The tongue is protruded straight, and the mouth is not drawn to one side.

The arms are irregularly mottled.

It hurts her feet to turn in bed. The temperature of the left leg seemed to the hand to be a little higher than the right; thermometer not used.

She was said to have stood unsteadily on either leg for several minutes. After being up a while she could not walk so well as at first.

The power of the left hand to grasp seemed less than that of the right. The power of the legs to push seemed equal. There was no difference in reflex action in the legs.

The following is the result of an examination of the sensation by the æsthesiometer.

Place.	Distance at which 2 points were distinctly felt. mm.
Foot, right,	45
" left,	25
Below breast, right,	at 100 mm. only 1 point felt.
" " left,	at 100 mm. only 1 point felt.
Over " right,	20
" " left,	35
Neck, right,	15
" left.	20
Arm, inside above elbow, right,	22
" " left,	15
Arm, outside, right,	30
" " left,	25
Forearm, right,	25
" left,	15
Palm of hand, right,	10
" " left,	7

The left breast was tender to the touch from the application of mustard.

The hospital records mention subsequently the occurrence of trembling in the left arm; severe pain in the left wrist; increase of numbness and loss of power in both hands; disturbed by people walking; great sensitiveness to touch; flushing of face and mottled skin.

On July 29th, I again saw her. The fingers of the left hand were contracted, and there was no power of motion in that hand, nor in the legs. A slight touch did not cause pain in the feet, though it did in the face. On exposing the feet to cold air, cramps were caused in the toes and feet. The skin was much more mottled than when first seen.

July 30th, she died, and it was not possible to obtain an autopsy.

In this case the seat of the lesion was at first chiefly in the sensory tract. At first the motor tract was only slightly affected, but as the disease advanced this also was implicated. At first the disease was on the left side and in the lower cervical or upper dorsal region. Later it probably extended a little higher, and also crossed over to the other side. It will be noticed that none of the cranial nerves were affected; the lower ones, the hypoglossal and spinal accessory, acted normally. The lesion, as shown by the symptoms, was exclusively spinal, and was situated probably at the upper part of the cervical enlargement, involving the brachial plexus, but not all of the cervical plexus.

CRIMINAL ABORTION.*

Read at the Bristol North District Medical Society, by O. C. Turner, M.D., North Attleboro', Mass.

Mr. President and Gentlemen,—There is a subject which deserves the gravest consideration of medical men, and which pertains to the most vital interests of society, but which is, or appears to be, unthought of, or at least untalked of, in our meetings. There is an ever-deepening shadow creeping over the face of the land, like a destroying plague. There is a soul-staining crime which is corrupting the community, a flood undermining the very foundations of our civilization, and which demands our united efforts to resist and sweep back. Physicians, whose efforts should be put forth to save and prolong life, connive and assist in destroying it. Parents, whose natural and Heaven-given instincts should lead them to cherish their offspring and multiply their species, debase themselves far below the level of the brute creation, and for their temporary convenience stain their hands with blood and their souls with sin. Where the Asiatic cholera or any other dreaded pestilence takes one this takes ten, and for every hundred that consumption, that scourge of our race, demands, this Moloch receives a sacrifice of thousands. Legislators overlook it, or at least make no efficient attempt to stay its progress; the press and the pulpit are almost silent in regard to it, and so the carnival of death goes on unchecked. Gentlemen, you know to what I refer, the slaughter which outherods Herod, *Criminal Abortion*.

How can we account for the prevalent apathy in regard to this crime, and for its fearful increase?

In the first place, things are not called by their right names. In these days, when theft is called peculation, robbery of public funds financial irregularity, &c., how can we expect to recognize as murder that which is called simply "getting rid" of something, or being "helped" out of trouble? There are other reasons, such as unnatural and fashionable life, where children are regarded as hindrances; but I wish to confine myself to the professional side of the question, and to the motives which should actuate us, as members of the medical profession, in our actions.

I lay it down then as a starting point, that criminal abortion is murder. I think the destruction of the fœtus in the mother's womb is just as much a murder as if one should knock it on the head after its birth. The defender of the system* says, "There is no life in the fœtus until respiration is established after birth." I contend that there *is* life there. Why not? When does life begin? Not till the child is entirely separated from the mother? Suppose that the child respires and the cord pulsates before it is tied. Surely the child is alive then. It cannot be that the mere act of tying the cord produces life. Then when did life begin? With respiration? That is only one added function. There was circulation previously, and the power of nervous action and motion. Why is not a fœtus alive when it is diving and plunging in its mother's womb? Simply because its lungs are not inflated? Out on such nonsense! One might as well say that a child born blind was not alive because it did not use its eyes. It is on record, I believe, that children have been born by the Cæsarean section, after the death of the mother. If there was no vitality in the fœtus previous to respiration, then why was it not dead, like the mother? There can be no doubt of it; there *was* vitality or life. Then if we acknowledge that the fœtus has life, how can we say at what period of gestation that life commences? The period of quickening varies, and I do not see why a fœtus is not quite as much alive just before it moves as just after. I think the All-seeing Eye can discern the germ of vitality at the very beginning of gestation, and the fact that *we* cannot discern it so soon ought not to convince us that it is not there. I stand firm in the opinion that there is life in the minutest ovum, and the burden of proof rests with the one who denies it.

My next assertion is, that under *no* circumstances whatever is the procuring of abortion justifiable, except in cases where there is such deformity of the pelvis that a viable child cannot be born. Many of the cases of criminal abortion are young women or girls who have "got into a scrape," as it is elegantly termed, and come to a physician for help. I care not what may be the position or prospects of the girl. We have *no right* to commit the *great crime*

* This communication was accompanied with the following note:—

Taunton, March 28, 1870.

Mr. Editor,—At the meeting of the Bristol North District Medical Society, Dr. O. C. Turner, of North Attleboro', read a paper on Criminal Abortion. The Society voted that the Secretary should send the same to the Editor of the Boston Medical and Surgical Journal for publication, and enclosed I send you the original copy.

Yours, &c., E. J. Bassett, M.D.,
Sec. Bristol No. Dist. Med. Society.

* We were not aware that any true physician defended the system.—Ed.

of murder to save her from a just measure of disgrace. If every physician would refuse every such application, cases of disgrace might be frequent for a while, but the women would soon learn that an ounce of prevention is worth a pound of cure.

Dean Trench, in his work "On the Study of Words," says, "What a source of mischief in all our country parishes is the one practice of calling a child born out of wedlock a 'love-child,' instead of a bastard. It would be hard to estimate how much it has lowered the tone and standard of morality among us; or for how many young women it may have helped to make the downward way more sloping still." Then let "bastard" mean bastard. Let the erring ones understand that medical men cannot be used as cloaks for their sins, and cannot be hired to commit a crime for the sake of saving them from the consequences of their own.

This brings the next thought forward, that by helping women out of such difficulties, the physician invites and encourages them to continue in their sins. He says, in effect, "Go on; no matter if you do get into difficulty; I will help you out." How easy for the woman to think, "I didn't incur disgrace that time; I can try it again without much risk." After this, how easy is the repetition of the offence!

But by far the *larger* number of these cases are married women, who incur no disgrace by having children, but who simply don't want them. Then if it is unjustifiable to procure abortions for unmarried women, even with the object of saving them from disgrace, how much less justifiable is it to procure them for this class, and yet, how large a number of such cases we are constantly hearing of. I venture the assertion that there is not a gentleman present who has not, more or less frequently, been importuned to interfere in cases of this kind. Who can doubt that if, by the uprightness of physicians, it were impossible to procure an abortion, the number of demands for assistance would decrease, on account of the extra precautions which would be taken?

"But," says the professional murderer, "if I don't do this some one else will; and I may as well have the money as these quacks." Here is the prime reason of his strong desire to save people from disgrace. A member of the medical profession, in good standing apparently, and not unknown to all of us, told me that not a day passed that he did not procure an abortion for somebody, and perhaps more than one.* He used the above argument in justification, but what weight has it? None at all. There are villains whose occupation it is to rob and murder defenceless travellers. Shall we, as physicians, go into that line of business, on the ground that we can cut their throats scientifically and bleed them to death easily? Why not murder in one way as well as in another? But there are physicians (gentlemen, do we know any of them?), whose principal business is this venal murder, to whom, by long practice, this crime has become so common as to excite no sensations of novelty or conscious guilt. What a condition of the moral faculties does this reveal!

But there is another consideration. If a physician procures an abortion, he not only kills one, but runs a risk of killing another, and very often his two victims rest in the grave together. How many are there of us who have not seen cases of this kind? Not many, I think. What is the effect of this? Does it not tend to make the physician reckless of human life? May he not say, "She wouldn't have died if I had let her alone, but no matter, no one can prove it." With the next one, "Well, that is only one more." And so what may we expect to find the character of the professional abortionist to be? I need not particularize on this point. They are in our very midst; we all know what they are. Unscrupulous, lecherous, adulterous perhaps (for we know that under certain circumstances, having a woman's secret at his disposal, the abortionist can make demands of her which she dare not refuse), ready to commit crime for a few dollars—why may we not suppose that he would be willing, for a small fee, to remove an aged parent from the path of an anxious heir, or perform any other crime which could be done easily and secretly?

Gentlemen, what can be done to remedy this state of things? The remedy rests with ourselves. Let us refuse, under any and all circumstances, to be accessory to the crime of which we have spoken. Let us discountenance any practitioner who persists in performing it. He is not worthy of recognition, either as a physician or a man. His manhood is blotted out since he has prostituted his medical knowledge to the service of crime.

In conclusion, I invite any man who has

* We are astounded that any regular practitioner should have dared to make such a confession. We say, show him up, and let him be expelled from the Massachusetts Medical Society.—Ed.

a word of defence for this system, to speak it. If there is any man who can justify it, let us know in what manner. But let us all remember that for all deeds done and sins committed we are to be held to a strict account, that the All-seeing Eye is upon us, and justice will sooner or later overtake us.

BONN, IN RHENISH PRUSSIA.

By Dr. Hatton.

As many will soon be coming to Germany on the opening of Spring, I thought I would send a few lines to induce students to come to this city, which is pleasantly situated on the Rhine, surrounded by beautiful scenery and many objects of interest, containing a fine university, with every facility for study. There are good professors, a good laboratory, and every thing needed is furnished. Let the young man who expects to spend two or three years on the continent, spend one year here, learn the German language and French, and lay the foundation for foreign study. I give you a plan of study, which I suppose is similar to what is in the other German cities, and similar to what we have in America.

9, A.M.—Surgery, every day of the week.

10.45, A.M.—Internal diseases, every day of the week.

12, M.—Anatomy or midwifery, except Tuesdays and Fridays, when diseases of the eye.

3, P.M.—Lectures on different subjects in the University.

4, P.M.—Lectures on different subjects in the University.

There is a reading room of some 400 or 500 papers and pamphlets; a library of 200,500 books; and an anatomy building.

To the ophthalmic surgeon the following may be useful.

Eye Clinique in Bonn.—This is conducted by Prof. Soemish, assisted by Dr. Sniewind. At 9, the patients begin to arrive. To the left is the door of the waiting room; in front, the room where the clinique is held. At 9.30, the doctor visits the patients in a branch infirmary, in an adjoining street. At 10, the clinique is held at the Professor's house; one half is used as his dwelling, and the other for the patients. The patients enter. Copper sulph., mercurial preparation, atropine, caustic—mild or strong, calabar bean, is applied according to the necessity of the case.

A small, dark room, with a gas-burner, is used for the ophthalmoscope. The tear passage is slit up, before the probe is passed. Graefe's operation is employed for cataract. A flannel or worked bandage is used. The process of dipping a child's head is also employed (but I think Dr. Williams's employment of tact much the best)—a basin of water—the child's head dumped in once or twice—the face dripping—chair and floor covered with water—clothes splashed—the child, frightened, opens its eyes—and the case is made out. The plan of treatment is the same here as in Berlin and Vienna, and I perceive little difference from the Boston treatment of diseases of the eye.

Bibliographical Notices.

The Preventive Obstacle, or Conjugal Onanism. The Dangers and Inconveniences to the Individual, to the Family and to Society of Frauds in the accomplishment of the Generative Functions. By L. F. E. Bergeret, Physician-in-chief to the Arbois Hospital (Jura). Translated from the Third French Edition, by P. De Marmon, M.D. New York: Turner & Mignard, Printers and Publishers, 109 Nassau St. 1870. 18mo. Pp. 182.

The *a priori* argument in favor of the theory that onanism and the various other forms of incomplete sexual intercourse are injurious, is not impaired by this book. But we came to its reading with the hope that the theory in question would be substantiated by M. Bergeret's facts. We have been disappointed. The cases cited show, for the most part, nothing more than mere coincidences, and sometimes prove too much. The latter effect is produced when scirrhus and other forms of cancer are traced to the so-called frauds, or to abortive sexual excitement. In some of the instances, too, excessive indulgence was apparently the cause of disordered health. There is no grouping of large numbers of cases of inflammation of the generative organs, of impotence, of nervous exhaustion, so as to show that a majority of these cases were associated with the practices in question; and we are not furnished with statistics to indicate that in communities where these practises are most common, there is special prevalence of the disorders assumed to have a causative relation with them.

That the "preventive obstacle" does

not always eliminate impregnation is, however, illustrated in the pages of the book before us.

A Practical Guide to the Study of the Diseases of the Eye: their Medical and Surgical Treatment. By HENRY W. WILLIAMS, A.M., M.D., &c. &c. Third edition, revised and enlarged.

THAT the profession appreciate Dr. Williams's efforts to give them a practical treatise on diseases of the eye, is sufficiently attested by the fact that two editions of the work have been exhausted during a period when the market has been flooded with well written books bearing like titles. So little time has elapsed since the publication of the second edition, that the third is presented, with the exception of a few verbal alterations, without change.

A Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart. By AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the Bellevue Hospital Medical College, &c. Second Edition, thoroughly revised and enlarged. Philadelphia: Henry C. Lea. 1870. 8vo. Pp. 550.

WE copy the preface to the Second Edition:—

"In revising this treatise for the second edition, the author has endeavored to incorporate the results of the study of the diseases of the heart during the ten years which have elapsed since the appearance of the work. Many additions and alterations have been made, and much has been rewritten. An analysis of about four hundred and fifty cases, recorded by the author during the period just stated, has served as the basis of the revision.

TEST FOR ARSENIC.—A new and very delicate test for arsenic has been discovered by Bettendorf. Its sensibility is so great that it is said to be capable of detecting one part of arsenic in a million parts of solution; and the presence of antimony does not affect it. In order to apply this test, the arsenious, or arsenic liquid is mixed with aqueous hydro-chloride (hydrochloric acid), until fumes are apparent; thereupon stannous chloride is added, which produces a basic precipitate, containing the greater part of the arsenic as metal mixed with stannic oxide.—*Medical and Surgical Reporter.*

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 21, 1870.

WE have received a pamphlet entitled, "Correspondence concerning a Fatal Case of Placenta Prævia, prepared by Charles E. Buckingham, M.D., Professor of Midwifery and Medical Jurisprudence in Harvard University, and printed for the benefit of the Profession." The preface we quote entire.

"This correspondence is published for the benefit of the medical profession, and more especially for the benefit of those who are led to express opinions formed upon insufficient data.

"It originated in a fatal case of Placenta Prævia. The cause of death was the general shock to the nervous system of a patient, attended by one unknown to her up to the hour of labor, and who was obliged by circumstances to announce to her the danger of her symptoms and the necessity of interference.

"Certain expressions in one or more of the letters might lead readers to suppose that the patient was left too early by her attendant. From the beginning of the attendance, however, until after death took place, at least two physicians* were in the room; and there was no time when one or the other was not compressing the uterus.

"The fact *that ice was not used* in treating the hæmorrhage, led some physician ignorant of the facts to comment upon the treatment of the case, and, either thoughtlessly or maliciously, to disturb the relations existing between the first two parties in the correspondence.

"A portion of these letters having been read by Mr. Barnard to patients of mine, it was my intention, if possible, to find out the parties to whom he had given accounts of the case, and to hold them responsible for the statements said to have been made by them.

"There was but one, however, who could be identified, and he denies Mr. Barnard's statements entirely, as will be seen by his letter.† Who may be the New York Professor spoken of, if such exist, I have no means of discovering; unless this document

* Dr Charles E. Swan was with me all the time, and just before death took place, Dr. B. E. Cotting arrived.

† The reader will please compare the passage on page 17, line 6, beginning with, "I got the opinion, &c.," and ending "has honored you," on the same page, with letters XIX., XX., and XXI.

may, perchance, fall in his way, and lead him to say voluntarily whether he has written upon the subject, and what.

"The conclusions finally arrived at were as follows, viz.:—

"1st. That the treatment of the case having been what I considered correct, there is no reason, on my part, for preventing publicity.

"2d. That not fearing publicity, there is no reason why the husband should have put upon him all the burden of telling the story.

"3d. That whereas no one, except myself and the medical gentlemen who were with me, knows what the treatment was, further than that *no ice* was used; of course, no one except ourselves can tell whether the treatment was correct or not.

"4th. That putting these letters into the hands of the younger members of the profession, may teach some of them the absurdity of commenting upon the treatment of cases of brother practitioners, as told by non-professional men who saw the cases, or by professional men who did not.

"CHARLES E. BUCKINGHAM,
"53 *Worcester Street, Boston.*"

The bulk of the pamphlet consists of a correspondence between Dr. Buckingham and Mr. Barnard, the husband of the unfortunate lady referred to, who died in consequence of placenta prævia. The basis of the discussion was the suspicion entertained by Mr. Barnard that "many of the means usually employed in such cases had been omitted in this."

Dr. Buckingham, at the first recorded interview with Mr. Barnard, inferred from the tone and character of the questions put to him, that the latter gentleman had been tampered with by some one; and consequently soon became very reserved, avoiding reply to interrogatories until the suspected *arrière pensée* should be discovered. In Letter No. V., the Doctor says to Mr. Barnard:—

"I fully believe that your suspicion and resentment, which must be as painful to you as it is unjust to me, are not spontaneous, but have been instilled by some person who is actuated by some most wicked purpose, either towards you or towards myself."

The predominant feeling toward Mr. Barnard which is awakened by reading the correspondence, is one of compassion at the grief which seems to have rendered him almost beside himself. It was natural that he should desire to know if everything had been done for his wife, so suddenly lost to him; and if in a transport of mental agony he brought against his physician the dreadful charge of having been the cause of Mrs. Barnard's death, that was something to be forgiven as soon as the accusation should be withdrawn. But, it would have been idle to describe and defend the treatment to him alone, as a non-professional person would be in no way competent to judge of its appropriateness. Accordingly we find Dr. Buckingham saying, in letter No. V.:—

"I therefore renew the proposal contained in my letter of the 26th inst., that I have quoted; but always upon the condition, that you entirely and explicitly retract the accusation that you have made of neglect or malpractice. I shall never condescend to defend myself against that charge before any other than a legal tribunal, and certainly I shall not answer the questions of any unknown inquisitor."

The proposal alluded to in the foregoing passage was as follows:—

"I shall answer the questions put by you in writing, being with you at the time, so that any misunderstanding of question or answer may be corrected upon the spot.

"I claim, however, that there shall be present, also, a medical gentleman, selected by each of us, to whom any question or answer *may* be referred to judge of its fairness. Neither of us shall select a physician who may be objected to by the other. Should you accede to this proposition, I leave it to you to make the first selection. With the desire for investigation, and the belief that you will be satisfied with the result, I am, very respectfully yours,

"CHARLES E. BUCKINGHAM."

The science, experience and skill of Dr. Buckingham as a practitioner of medicine are above question in this community. In his specialty of midwifery, he ranks as an authority; and his thoroughness in the practice of it, together with his devotion to his patients, are unsurpassed by none—equalled by few. Though no one but Dr. Buckingham and the medical gentlemen who assisted him in the case of Mrs. Barnard knows what the treatment was, we feel perfectly assured that no feasible mea-

sure for her safety and comfort was omitted or for an instant remitted. For him, therefore, to describe that treatment now, would obviously be to divert attention from the main points in the case—the personal relations of the interlocutors, known and unknown—and would render the essentials of the controversy liable to be lost sight of in the discussion of side issues. But, we hope that when the proper time shall have come, Dr. Buckingham will see fit to lay before the profession a description of the conditions and course of the case, together with its treatment; because we are fully confident that his skill and faithfulness will thus be completely vindicated to the judgment of all medical men, as it is now trusted in by those who know him.

We now give the passage to which attention is specially invited in the note to the preface—the letters referred to—and also those with which the correspondence concludes.

"I got the opinion of many physicians; but they only augmented my torture—for *all* expressed surprise that nothing more had been done for the salvation of *the* life which was of consequence to me; and informed me what they should have done in a similar case. From what you have said to me, I know you would like the names of the physicians, that you might pronounce a judgment upon their eminence and their fitness. I will only say this; they were those whom Harvard University has not only honored with degrees, but among them there was one, whom this same University has honored with an appointment as Professor equal in distinction to that with which she has honored you."

No. XIX.

"My Dear Sir,—In the case of Mrs. Barnard, to which you refer, so far as I *know from the account of her husband*, I could not judge of the appropriateness of the treatment—I could form no opinion and of course could express none.

"From *your account* of the case, I should judge you had endeavored faithfully to discharge your duty.

"Yours truly, D. Humphreys Storer.
"*Jan.* 20, 1870."

"No. xviii. and No. xix. were enclosed in the following letter, No. xx., to Mr. Barnard, whose answer, and the remainder of the correspondence, are left without comment."

No. XX.

"Boston, Jan. 28th, 1870.

"My Dear Sir,—Should you see fit to read a part or the whole of our correspondence to any more patients of mine, will you oblige me by reading also the enclosed copies as an appendix.

"Respectfully yours,
"Charles E. Buckingham.
"*D. Barnard, Esq.*"

No. XXI.

"Boston, Feb. 2d, 1870.
"*Dr. C. E. Buckingham.*

"Dear Sir,—Yours of January 28th, enclosing copies of several letters, has been received.

"In one of them your correspondent says, 'From *your account* of the case, I should judge you had endeavored faithfully to discharge your duty.'

"Will you please inform me what '*your account* of the case' was?

"Respectfully yours, D. Barnard."

No. XXII.

"Boston, Jan. 22d, 1870.
"*D. H. Storer, M.D.*

"My Dear Sir,—Your note of Jan. 20th, in reply to mine of the 19th, was received, and I thank you for it.

"The case has been repeatedly reported, as I understand, by Mr. Barnard, and the opinions of other physicians concerning the treatment of the case have been largely quoted, but without my being able to obtain their names. It has been suggested, that the entire correspondence should be printed for distribution in the profession, as a means of finding out who has been consulted, and if others have been quoted falsely as well as yourself.

"Should you desire to make any change in your notes before printing? I ask this, because you speak in your last note of '*Your (my) account of the case,*' and I believe I have given you no account of the treatment.

"I am, very respectfully, yours,
"Charles E. Buckingham."

No. XXIII.

"Dear Sir,—I am not a little surprised that you should say, 'you had given me no account of the treatment.' If you had not done so, how could I say '*I thought you had discharged your duty?* You must excuse me from hearing any more upon this subject. Respectfully,

"D. H. Storer.
"*Boston, Jan.* 24, 1870."

CORRECTION ADDRESSED TO THE *UNION MEDICALE.*

A *feuilletoniste* in that valuable journal has misinterpreted our vernacular. He says that in Boston "these deaths from chloroform are cited to the discredit of the great discovery of anæsthesia, just as deaths from variola are made an argument against the utility of vaccination." (*Ces morts par le chloroforme sont exploitées contre la grande decouverte de l'anesthesie comme les morts par le variole contre la vaccine.*) It is precisely this blending the discovery of anæsthesia with the application of chloroform to anæsthetic purposes against which we are protesting. It is *etherization* which should *par excellence* be used to designate the "discovery of anæsthesia," because it was with the inhalation of sulphuric ether that anæsthetics were first introduced into the general practice of surgery. On the other hand, it is the production of anæsthesia by *chloroform* that we would banish from civil practice. The benefits of anæsthesia by *sulphuric ether* we zealously maintain and proclaim; and we point with pride to Boston as the birthplace of that form of anæsthetic inhalation to which scientific scrutiny has assigned not a single victim; all false accusations to the contrary notwithstanding. *Hinc illæ lacrimæ!*

Our French friends seem to find the English language very difficult of translation when ether is concerned. Does that agent specially affect the portion of the brain which has been supposed to be the seat of aphasia?

ADMISSION OF COLORED DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—Our distant neighbor, the Editor of the Richmond and Louisville *Medical Journal*, rebukes the other Medical Journals of the country for not having spoken out on the subject of admitting colored delegates to the meetings of the American Medical Association. Dr. Gaillard states his own views to the effect that it would be right to grant such admission, but that it would not be expedient; for that it would cause a disruption of the Association.

We hardly think medical editors are called upon to sound a blast upon the subject. Our publications are not in the position of political organs, and we should avoid the appearance of dictating to any of our associations. But, as our cotemporary has summoned us to speak, we are quite willing to present our opinion for what it may be worth.

We hold that it would be wrong to refuse the admission of colored delegates to seats in the convention of the American Medical Association, and that what is wrong is inexpedient.

Further, the exclusion advocated by our brother Editor would disqualify, render ineligible as delegate, at least one colored physician who wore the uniform of the United States in the late war of the rebellion. There is one such now practising in the place of the approaching meeting of the Association, who was a Medical Director in the service of the Government which holds its seat in the District of Columbia. We can see no consistency or propriety in imposing a *civil disability* on him, by the votes of those who sustained the integrity of the nation during the last decade. We forbear to make the antithesis.

If the American Medical Association can be rent in twain by such an issue of a past controversy as this, then it is not worth preserving. If the question comes up, we trust that it will be squarely met; and that Union men will show that though they can forgive their enemies, they do not forget their friends.

A matter, however, so fraught with possible consequences of moment, had better be, so far as practicable, quietly ignored. "Let the dead past bury its dead!"

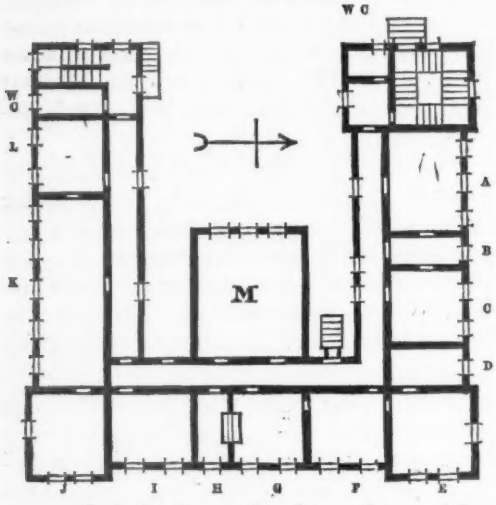
LEIPZIG, March 8th, 1870.

MR. EDITOR,—Thinking it may interest your readers to hear something of the way in which physiology is studied and taught at Leipzig, I venture to ask a place in your columns for the following communication.

Leipzig is a city very little visited by American medical men, for whom the larger cities, such as Berlin and Vienna, offer in general greater attractions in their superior opportunities for clinical observation. The student of physiology and chemistry, however, finds here facilities for prosecuting his studies which are not surpassed in any city in Germany.

The physiological laboratory, where I am at present working, owes its existence to the energy of Prof. Carl Ludwig and to

the liberality of the government of Saxony. As it is universally acknowledged to be the most complete establishment of the kind in Europe, it seems to me to merit a somewhat detailed description. The building, as may be seen by the annexed plan, has



somewhat the form of a horseshoe, with a small, projecting portion in the middle, where the lecture-room is situated. The dimensions are—on the north and south sides, 119 feet 2 inches; on the east side, 121 feet 11 inches. The right wing of the building constitutes the microscopical department, the left the chemical department of the laboratory, while the central portion is devoted to the study of experimental physiology in the narrower sense of the word.

To describe the rooms more minutely. Room A is arranged for the accommodation of beginners in the study of microscopy, and is furnished with boxes to contain the microscopes, and a large ground-glass tablet, by means of which the lectures on microscopy are illustrated with drawings in colored chalk. Room B is the private study of the assistant in microscopy. Room C is intended for more advanced students in microscopy, and contains an injecting apparatus, by means of which three different fluids can be injected simultaneously under any required pressure and for any length of time, while the injection mass and the tissue to be injected are heated over a water bath. Room D contains a small library, consisting of such books as are most needed for constant reference. Room E is furnished with glass cases, in which physiological apparatus is kept when not in use. As a rule, no experiments are performed in this room. Rooms F, G and H are devoted to experimental physiology, and are furnished with operating tables, with bellows attached for keeping up artificial respiration on *curarized* animals, registering apparatus of various sorts for recording the pressure of the blood, water baths where any required temperature may be kept up indefinitely, an injecting apparatus like that in the microscopical department, evaporating closets, glass cases for apparatus, &c. Between rooms G and H is a small closet arranged for observations with the spectroscope. Room I is the chamber where all experiments are performed which require the use of large quantities of quicksilver. It contains two quicksilver pumps for extracting gases from fluids, instruments for measuring the activity of the respiration in man and the lower animals, &c. Room J is divided into two portions, one of which is used for a weighing room and the other for experiments in acoustics. Rooms K and L contain, besides the ordinary furniture of chemical laboratories, the ingenious air pump of Bunsen, by which the process of filtering is so greatly accelerated. The lecture room, M, accommodates about one hundred students. Tables running on a small railroad in front of the seats, enable the lecturer to demonstrate his experiments very considerably. The room is lighted from above as well as from the side, and if necessary, can be darkened completely, for optical experiments.

In the basement of the building is a small gas-engine of about one-horse power, which drives the respiration apparatus, registering instruments, &c. In the basement are also the rooms where the animals are kept (one room being devoted entirely to frogs), a chamber furnished with refrigerators for performing chemical experiments, where a low temperature is required, a chamber containing furnaces for fusion, a work-shop, store-rooms, &c.

The second story of the building contains the rooms of Prof. Ludwig and his family, and those of other persons connected with the laboratory. In the court-yard is a small building containing the necessary arrangements for experimenting on horses and other large animals. Here, also, are an aviary and a small fish-pond.

Besides the permanent and stationary apparatus already described, the laboratory is well supplied with all sorts of instruments for physiological experiments, and new apparatus is constantly ordered for special investigations. There is also a very skilful mechanic living in the laboratory, whose duty it is to make alterations or repairs in the apparatus as circumstances may require.

Prof. Ludwig directs personally all the work done in the laboratory, devoting his whole time to the superintendence of his pupils, and making no independent investigations. Each of the pupils, at present nine in number, makes, under the direction of the Professor, a series of experiments with a view of settling some special point in physiology. The results arrived at are published at the end of the year, sometimes under the names of the Professor and pupil together, and sometimes under that of the pupil alone. The whole work of the laboratory forms every year a pamphlet of 150 to 250 pages.

Prof. Ludwig lectures five times a week on physiology, and his assistant, viz., Prof. Schweigger-Seidel, in microscopy, Dr. Hufner in chemistry, and Dr. J. J. Müller in physics, also lecture on their specialties, besides superintending the work done in their respective departments.

It will thus be seen that abundant facilities are here offered, not only for learning the existing state of physiological science, but also for becoming familiar with the manner in which physiology is at present studied in Germany. The patient, methodical and faithful way in which the phenomena of life are investigated by the German physiologists not only inspires great confidence in their results, but encourages one in the hope that the day is not far distant when physiology will take its proper place as the only true foundation of medical science.

H. P. Bowditch.

Record of Mortality in Berlin for December, 1869. (Translated for this Journal by S. G. Webber, M.D.)—Births, 1357 boys, 1308 girls; total, 2615, of which 222 boys and 196 girls were illegitimate. 33 times there were twins and three times triplets.

660 couple were married.

Deaths 1771 (906 males, 865 females). Under 1 year, 660; between 1 and 5 years, 307; between 5 and 10 years 41; between 10 and 15 years, 16; between 15 and 20 years, 37; between 20 and 40 years, 255; between 40 and 60 years, 207; between 60 and 80 years, 205; betw. 80 and 90 years, 32; betw. 90 and 100 years, 6;—under 15 yrs., 1024; above 15 yrs., 742;—age unkn., 5.

Cause of death.—Born dead, 80 m., 63 f.; lack of vitality after birth, 32 m., 25 f.; congenital malformation, 2 f.; old age, 27 m., 47.; suicide, 22 m., 5 f.; accident, 17 m., 6 f.; puerperal eclampsia, 3 f.; flooding, 3 f.; puerperal fever 15 f.; diarrhœa, 1 m., 1 f.; smallpox, 7 m., 8 f.; scarlatina, 6 m., 6 f.; measles, 22 m., 21 f.; pemphigus (blasenausschlag), 1 f.; thrush, 1 m., 1 f.; whooping cough, 5 m., 18 f.; gastro-nervous fev. and typhus, 20 m., 21 f.; purpura, 1 f.; catarrhal fev., 9 m., 5 f.; rheumatism, 1 m., 1 f.; erysipelas, 6 m., 6 f.; induration of cellular tissue, 2 m., 2 f.; diarrhœa and diarr. with vomiting of children, 20 m., 21 f.; inflam. of the brain, 32 m., 24 f.; gangrenous croup (diphtheria), 28 m., 34 f.; membranous croup, 12 m., 14 f.; quinsy, 1 m., 1f.; inflam. of air passages, 37 m., 32 f.; inflam. of the pleura and the lungs, 43 m., 52 f.; of the heart 1 f.; of the stomach and intestines, 2 m.; of the peritoneum, 1 f.; of the liver, 1 m.; of the urinary organs, 5 m., 3 f.; of the abdomen without specifying the organ, 4 m., 9 f.; organic disease of the brain, 12 m., 8 f.; of the spinal cord, 2 m., 1 f.; of the heart, 19 m., 19 f.; of the lungs, 9 m., 9 f.; of the liver, 2 m., 3 f.; of the stomach and intestines, 7 m., 7 f.; of the abdomen without stating the organ, 5 m., 2 f.; dropsy in the chest, 1 f.; abdominal dropsy, 1 f.; ovarian dropsy, 1 f.; general dropsy, 13 m., 10 f.; Bright's disease, 3 m., 4 f.; syphilis, 3 f.; scrofula and rachitis, 3 m., 1 f.; tubercle of the brain, 2 f.; laryngeal and pulmonary phthisis, 146 m., 119 f.; intestinal phthisis, 2 f.; chronic skin disease, 1 f.; cancer of the stomach, 4 m., 3 f.; of the liver, 2 m.; of the breast, 1 f.; of the nose, 1 m.; of the uterus, 7 f.; of the ovary, 1 f.; of the abdomen, 1 f.; of part not mentioned, 3 m., 1 f.; tetanus, 20 m., 8 f.; spasm of the glottis, 4 m.; epilepsy, 1 m., 1 f.; eclampsia of children, 69 m., 61 f.; cerebral apoplexy, 27 m., 30 f.; pulmonary and cardiac apoplexy, 8 m., 20 f.; caries and necrosis, 1 m., 1 f.; strangulated hernia, 2 m., 3 f.; carbuncle, 1 m.; noma, 1 m.; suppuration of cellular tissue and glands, 3 m., 1 f.; senile gangrene, 1 f.; inflammation of the umbilicus, 1 m.; fatal termination of surgical operation, 2 m., 2 f.; other surgical diseases, 4 m., 4 f.; marasmus, 48 m., 39 f.; paralysis of the lungs, 20 m., 23 f.; teething, 6 m., 6 f.; unknown, 11 m., 6 f.

Total, 906 m., 865 f.—*Berliner Klinische Wochenschrift*, March 14, 1870.

DEATHS FROM CHLOROFORM.

"At Accrington, on Saturday week, a young woman aged 30, named Susanna Horsfall, went to Dr. Millar's surgery to have some teeth extracted. The teeth were difficult to extract, and chloroform was administered. After having pulled out the third tooth, Dr. Millar observed that the patient was dying; and life was soon extinct. She had had chloroform a week before, but it did not take effect."—*British Medical Journal*, *April* 2, 1870.

Medical Miscellany.

We invite the attention of our readers to the communication—published in the daily papers—of the Consulting Physicians of Boston to the City Government.

Dr. William Ingalls has been appointed Surgeon to the Boston City Hospital, *vice* Dr. George Derby resigned.

Boston Dispensary.—Drs. Samuel W. Langmaid, David F. Lincoln and Clarence J. Blake, have been appointed respectively surgeon, physician and aurist, at the Central Office of this institution.

At a recent meeting of the Suffolk District Medical Society the following officers were elected for the year 1870-71:—*President*, George C. Shattuck. *Vice President*, G. H. Lyman. *Secretary*, D. H. Hayden. *Treasurer*, A. B. Hall. *Librarian*, B. Joy Jeffries. *Commissioner on Trials*, George Derby. *Committee of Supervision*, G. H. Gay, F. H. Gray. *Committee on Social Meetings*, James Ayer, Calvin Stevens, Henry I. Bowditch, C. D. Homans, F. B. Greenough. *Councillors*, S. L. Abbot, J. Ayer, J. Bigelow, H. J. Bigelow, H. I. Bowditch, B. Brown, C. E. Buckingham, S. Cabot, H. G. Clark, P. M. Crane, C. Ellis, J. Flint, J. B. Forsyth, G. H. Gay, A. B. Hall, G. Hayward, R. M. Hodges, C. D. Homans, Wm. Ingalls, J. B. S. Jackson, G. S. Jones, J. S. Jones, G. H. Lyman, F. Minot, W. W. Morland, S. Morrill, E. Palmer, C. G. Putnam, Wm. Reed, G. C. Shattuck, D. H. Storer, D. McB. Thaxter, C. E. Ware, H. W. Williams, W. G. Wheeler. *Censors*, G. H. Lyman, B. Joy Jeffries, H. F. Damon, A. D. Sinclair, Hall Curtis.

Phthisis in Melbourne.—The Melbourne *Age* for January 29th complains of the practice in vogue in Great Britain of sending consumptive patients to die in Victoria, in the vain hope that the warm dry climate will restore health. The *Age* gives some ugly facts as to the prevalence of phthisis in the colony."—*British Medical Journal, Apr.*, 1870.

Jute.—A new and rather singular feature in the sales of last week at Liverpool was the purchase of a hundred bales of jute for shipment to America, for the purpose of being dyed and sold as "ladies' back hair." There were other orders for the same purpose.—*Ibid.*

Benefits of Good Sewerage.—Any one who is skeptical about the practical benefits of hygienic measures should go to Leek, in Staffordshire, England, and be converted. Sewerage works have been in existence for the last nine years in that town; and during this time the annual rate of mortality has decreased from 29 to 24 per 1,000, and the average age of the dead has increased by nearly one-third. If there be no sources of fallacy in the calculations, these facts give a proof of the good results of efficient sewerage as instructive to us as it is important to the inhabitants of Leek.—*Medical and Surgical Reporter.*

Protection of Lead Water Pipes.—Dr. Schwarz, of Breslau, notes a simple method of protecting lead pipes from the action of water, by forming on the inside surface of the pipes an insoluble sulphide of lead. The operation, which is a very simple one, consists in filling the pipes with a warm and concentrated solution of sulphide of potassium or sodium; the solution is left in contact with the lead for about fifteen minutes.—*Medical and Surgical Reporter.*

The House naval committee is ready to report its bill for the re-organization of the navy. The relations of line and staff officers are placed on the same footing as in the army.

Smallpox is still epidemic at Paris. One hundred and twelve deaths are recorded from it in the week before last. We repeat our advice that some of the Dublin gentlemen conversant with the details of vaccination in that city should write and tender their experience to our Parisian brethren.—*Dublin Medical Press and Circular.*

Addendum.—*Ichthyocolla preparata Spaldingii.* The *orthography* "Icthyocollæ," in our last issue, is the latest innovation.

To Correspondents.—Communications accepted:—Sudden Death Post Partum.

Married,—In this city (Dorchester District), 14th inst., Hugh Doherty, M.D., of Boston, to Miss Emily A. Hazlewood, of West Roxbury.

Deaths in fourteen Cities and Towns of Massachusetts for the week ending April 16, 1870.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.—Consumption.	Pneumonia.
Boston	110	27	8
Charlestown	8	2	1
Worcester	9	1	3
Lowell	10	2	0
Milford	6	2	2
Chelsea	1	0	0
Cambridge	7	1	0
Salem	9	3	0
Lawrence	9	2	0
Springfield	6	0	2
Lynn	5	0	0
Fitchburg	3	0	1
Newburyport	3	2	0
Fall River	7	0	1
	193	42	18

All the above-named places report eight deaths from typhoid fever, five from measles, six from croup and diphtheria, and three from scarlet fever.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending April 16th, 109. Males, 62—Females, 48.—Accident, 2—anæmia, 1—aneurism, 1—apoplexy, 2—inflammation of the bowels, 2—congestion of the brain, 1—disease of do., 2—inflammation of do., 2—bronchitis, 3—cholera infantum, 3—consumption, 27—convulsions, 1—croup, 1—debility, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 3—drowned, 1—scarlet fever, 2—typhoid fever, 5—gastritis, 3—disease of the heart, 5—homicide, 1—infantile disease, 4—disease of the kidneys, 5—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 4—measles, 3—old age, 1—paralysis, 2—premature birth, 1—pyæmia, 1—scrofula, 2—suicide, 1—unknown, 6.

Under 5 years of age, 38—between 5 and 20 years, 5—between 20 and 40 years, 26—between 40 and 60 years, 25—above 60 years, 16. Born in the United States, 70—Ireland, 29—other places, 11.